

## REMARKS

The applicants appreciate the Examiner's thorough examination of the Application and request reexamination and reconsideration of the Application in view of the preceding amendments and the following remarks.

The Examiner indicates that claims 2, 7 and 28-30 would be allowable if rewritten in independent form, and that claims 40-43, which correspond to claims 2 and 28-30 rewritten in independent form, are allowed. Applicants would like to thank the Examiner for the indication of allowable subject material.

The Examiner objects to claims 32 as allegedly being a substantial duplicate of claim 31. Claim 32, however, recites that an analog output is a constant average signal, whereas claim 31 recites that an analog input is a constant average signal. Thus, these claims clearly do not cover the same thing, nor are they substantial duplicates of each other since one relates to an output signal, and the other relates to an input signal. Accordingly, the Applicants respectfully request that the Examiner withdraw this objection of claim 32.

Claims 1 and 25-27 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,415,003 to Raghavan. The Applicants herein amend claim 1 to incorporate the features of claim 2, which the Examiner indicates is allowable. The Applicants also cancel claim 2 and claim 28 since it depended from claim 2.

The subject invention results from the realization that an improved communications system which can compensate for the unpredictable transfer function due to component mismatches and parasitic elements can be achieved with a calibration system which is responsive to an altered reference signal of the transmitter circuit to adjust the reference signal level of, in the embodiment

of claim 1, both the transmitter and receiver circuits to compensate for variations in the transmission signal due to the transfer function of the transmission medium. To accomplish this, both the transmission signal and the reference signal are transmitted through the transmission medium.

The claimed calibration system for a communications system as recited in claim 1 uses a calibration circuit responsive to an altered reference signal of the transmitter circuit to adjust the reference signal level of either the transmitter or receiver circuit to compensate for variations in the transmission signal. During a calibration cycle of the claimed communication system, the transmitter circuit sends a predefined reference signal through the transmission medium. The predefined signal is altered when the transmitter circuit transmits the signal through the transmission medium before it is received by the receiver circuit. The calibration circuit, as recited in claim 1, uses the digital output of the receiver circuit to adjust the reference signal level of both the transmitter and receiver circuits.

In contrast to the subject invention, Raghavan fails to disclose or suggest a calibration system for a communication system that includes a calibration circuit responsive to an altered reference signal of the transmitter circuit altered by the transmission medium for adjusting the reference signal level of both the transmitter and receiver circuits to compensate for variations in the transmission signal due to the transfer function. Thus, Raghavan fails to teach, disclose or suggest Applicant's invention of claim 1 and the claims depending therefrom.

Accordingly, claim 1 is patentable and allowable under 35 USC §102(e) over Raghavan. Because claims 25-27 depend from an allowable base claim, claims 25-27 are allowable under 35 USC §102(e) over Raghavan.

Claim 3 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,415,003 to Raghavan or under 35 U.S.C. §103(a) as allegedly being unpatentable in view of Raghavan; claims 4, 6, 8 and 31-34 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Raghavan in view of U.S. Patent No. 5,883,907 to Hoekstra; and claims 5 and 9 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Raghavan in view of Hoekstra, and further in view of U.S. Patent No. 6,304,594 to Salinger.

As described above, Raghavan does not teach, suggest or disclose each and every element of the invention as recited in Applicants' claim 1. Because each of the claims in these rejections depends from claim 1, they are patentable for at least the reasons stated above, and are further patentable since they include one or more additional features.

Additionally, the Applicants herein add new claims 44-47 of which claim 44 is an independent claim and claims 45-47 depend therefrom. New claim 44 includes features similar to claim 1, but recites that the calibration circuit adjusts the reference signal level of said transmitter circuit to compensate for variations in the transmission signal due to said transfer function. As Raghavan fails to disclose a calibration circuit that adjusts the reference signal level of said transmitter circuit, claim 44 and the claims depending therefrom are also allowable.

Each of the Examining Attorney's rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for publication. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the

undersigned or his associates collect in Waltham, Massachusetts at (781) 890-5678.

Respectfully submitted,

A handwritten signature in dark ink, reading "David W. Poirier". The signature is written in a cursive style with a horizontal line underneath it.

David W. Poirier  
Reg. No. 43,007